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FIVE YEAR REVIEW
SOURCE CONTROL REMEDY

PICILLO FARM SUPERFUND SITE
COVENTRY, RHODE ISLAND

MAY 1993

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

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5/19/93
Date

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1.0 Introduction

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by Section 121(C), and Section 300.430(f)(4)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), requires a five year review of remedial actions selected on or after October 17, 1986. This report summarizes the results of this review which was conducted in accordance with OSWER Directive 9355.7-02, "Structure and Components of Five Year Reviews" (May 23, 1991). Because the Record of Decision (ROD) was signed on March 3, 1987 (post-SARA remedy), and the remedy will not allow unlimited use and unrestricted exposure, this review is a Statutory Review.

The objective of this review is to evaluate the effectiveness of the selected remedy and to determine if it remains protective of human health and the environment. The ROD signed in March 1987 selected a remedy which called for the off-site disposal of stockpiled contaminated soil and the implementation of the RI/FS to determine the nature and extent of the ground water contamination and to evaluate cleanup alternatives. In 1988, under an agreement with EPA, four of the Potentially Responsible Parties (PRPs) performed the off-site removal of the contaminated soil and site closure activities, such as fencing of the site, grading and establishing a vegetative cover on the site.

2.0 Background

The Picillo Farm Site is located on Piggy Hill Lane in Coventry, Rhode Island, near intersection of State Highway 102 and Perry Hill Road (**Figure 1, Appendix A**). Coventry is a community of approximately 31,000 residents and is located approximately 20 miles southwest of Providence. The original Site, listed on the National Priority List published in September 1983, consisted of 7.5 acres of the Picillo Farm property where illegal disposal activities have been documented. The "Site" is defined as the area including, but not limited to, the area of contamination. The Site includes the 7.5-acre disposal area, which is currently fenced, and approximately 35 acres of surrounding woodland and wetland areas.

The Site is located in a rural area and is surrounded by mixed woods and wetlands. Residential properties are located north, northeast and east of the Picillo Farm property, along Perry Hill and West Log Bridge Roads, with the closest two residences located on the Picillo Farm property, approximately 1,300 feet north from the disposal area boundary. A new residential development at West Log Bridge Road and Perry Hill Road is currently on-going. All nearby residences are served by private wells. To the west, southwest and south the Site is surrounded

by a mix of wetlands and wooded areas. The Picillo Farm lies one mile west of the Quidnick Reservoir, which is used for recreational purposes. Unnamed Swamp, adjacent to the farm property drains into Whitford Pond and Great Cedar Swamp, approximately a mile southwest of the farm. The wetlands and surface water bodies adjacent to the Site are considered Class A according to the Rhode Island Water Quality Standards.

The Picillo Farm property had been used as a pig farm when drums containing hazardous wastes and bulk wastes were illegally disposed into several trenches within a 7.5-acre area of the farm over a period of months in 1977. Wastes disposed of at the Site included industrial solvents, oils, pesticides, PCBs, paint sludges, resins, still bottoms, resins and other hazardous materials. These dumping activities also contaminated ground water and surface water in the vicinity of the Site. In September 1977 a sodium aluminum hydride explosion and fire at the site brought the dumping activities to the attention of regulatory agencies.

Since September 1977, a number of investigations and remedial activities have been conducted at the Site. The State of Rhode Island and EPA shared responsibilities in joint cleanup activities and supervision. Between 1980 and 1982 the trenches located along the perimeter of a cleared field -- the northeast trench, northwest trench, west trench, south trench, and two slit trenches -- were excavated, approximately 10,000 drums and significant quantity of contaminated soil were removed and disposed off site. Approximately 6,500 cubic yards of contaminated soil from this excavation was placed in three stockpiles on the site and was designated as PCB pile and first and second phenol piles. In 1982, RIDEM contractor performed land farming of the first phenol waste pile and decreased the phenol concentration from approximately 870 ppm to 60 ppm. Pilot studies conducted on the biodegradation of the PCB contaminated soils proved to be unsuccessful.

In 1985, after conducting a Remedial Investigation/ Feasibility Study (RI/FS), EPA issued a Record of Decision (ROD) which called for disposal of contaminated soil in an on-site RCRA landfill. The State of Rhode Island contested the ROD, and in 1987, following the enactment of the Superfund Amendments and Reauthorization Act (SARA), EPA issued an amended ROD. The amended ROD required the following remedy:

- Disposal of approximately 3,500 cubic yards of primarily PCB contaminated soils and disposal of approximately 3,000 cubic yards of primarily phenol contaminated soils offsite in a RCRA/TSCA landfill.

- Disposal of the samples collected during site investigations.

- Implementation of site closure activities.

This ROD also required the following operation and maintenance activities:

- Periodic inspections of the site.

- Mowing the site if necessary.

- Maintenance of any run-on/run-off control systems.

- Maintenance and periodic replacement of the site fence.

The ROD also stated that the recommended remedy will not eliminate the residual ground water contamination at the Site. The ROD required EPA to conduct a remedial investigation/ feasibility study to determine the nature and extent of the contamination and to evaluate cleanup alternatives.

In 1988, under an agreement with EPA, four of the Potentially Responsible Parties (PRPs) performed the off-site removal of the contaminated soil and site closure activities: filling, grading and revegetating the site, constructing of surface water runoff control system, and installing a fence around the 7.5 acre disposal area. Also in 1988, EPA initiated the ground water RI/FS; sampling and other field activities started in Spring 1990 and continued through Winter 1992. The Record of Decision is planned to be prepared in September 1993.

In May of 1988, because of the concerns about Site contamination, the Town of Coventry placed a moratorium on building near the Site. A year later, a local developer successfully challenged the moratorium in court and residential development is currently on-going in the vicinity of the Site.

The Rhode Island Department of Health has been sampling residential drinking water wells in the vicinity of the Site on a yearly basis. The results of the sampling activities indicate that the residential water quality is within the EPA Drinking Water Regulations and Health Advisories, considered to be protective of public health.

3.0 Document Review

The documents described below were reviewed and utilized to help evaluate the effectiveness of the selected remedial action with respect to adequately protecting human health and the environment.

The Administrative Record for the Site is located at the EPA Region I Records Center, 90 Canal Street, Boston, MA and at the Public Library, 1672 Flat River Road, Coventry, RI. The following documents were reviewed as the most applicable to this Five Year Review:

- "Record of Decision Remedial Alternative Selection," EPA Region I (September 30, 1985).
- "Amended Record of Decision Remedial Alternative Selection," EPA Region I (March 3, 1987).
- Consent Decree, *United States of America v. Ashland Chemical Company, GAF Corporation, General Electric Company, and Monsanto Company,* United States District Court for the District of Rhode Island, Civil Action Number 87-0475 and *James O'Neill v. Warren V. Picillo, Sr., et.al.,* United States District Court for the District of Rhode Island, Civil Action Number 83-0787 (negotiated January 1987 to April 1987 and entered by the court on April 14, 1988).
- Remedial Design Documents, Bechtel Environmental, Inc. (May 13, 1988).
- "Final Report for the Picillo Farm Superfund Site Remediation Activities." Bechtel Environmental, Inc. for the settling parties (January, 1989).
- Trip Report on a Visit to the Picillo Site (January 4, 1989), concerning conditional approval of the construction and start of the operation and maintenance period.
- Site Inspection Report, Ebasco Services, Inc. (May 5, 1989).
- May 1989 Progress Report, with attached Post Closure Maintenance Plan Checklist.
- Letters from EPA and the State of Rhode Island to Bechtel Environmental, Inc. (respectively, February 7, 1990 and March 26, 1990) concerning notification that work performed by the Settling Parties under the Consent Decree has been completed.

- "Remedial Investigation Activities at the Picillo Farm Site," Volumes I thru X. Arthur D. Little, Inc. (December 9, 1992).

The records indicate that the remediation activities were completed in October 1988. The piles of contaminated soil, approximately 200 crushed drums and site investigation samples were removed off-site; the site was graded and revegetated; a run-on/run-off control system and a perimeter fence with three gates were installed.

A final report, certifying the project completion was prepared by the Settling Parties in January 1989. EPA granted conditional approval of the construction in the January 4. 1989 letter, which followed the November 28, 1988 site inspection. The conditional approval required reseeding of the site in early spring of 1989 in order to establish good vegetative cover over the entire area. In addition, the letter required the Parties to establish a crushed stone drainage channel in place of a large erosion gully in the northern part of the site. For one year from the date of this letter the Settling Parties were responsible for the O&M activities.

On May 1, 1989 the Settling Parties performed an inspection of the perimeter fence and made minor repairs as noted in the May 2, 1989 inspection report. The inspection revealed no O&M issues other than these previously identified by EPA. The first post closure joint site inspection by the EPA, RIDEM and the PRPs was held on May 2, 1989, at which details of the activities described in the conditional approval were discussed and agreed on. New seed mixture, including northeastern wildflower mixture, was proposed in place of Rhode Island DOT mix initially used, since the mix did not seem to grow well in the western area. A rip-rap channel was agreed to be constructed in place of the northern drainage gully to function as the main drainage channel for the site (see May 5, 1989 Site Inspection Report, Ebasco).

From May 22 to 25, 1989, the remaining O&M issues were rectified. The Settling Parties regraded the eroded drainage gully in the northern portion of the site; placed the geotextile and rip-rap to stabilize drainage channel; and seeded the site with alternate seed mix (see monthly progress report, May 1989).

Another post-closure site inspection was held on December 19, 1989 by EPA, RIDEM and PRPs to review the operation and maintenance work performed since January 4, 1989 by the Settling Parties. Following this inspection EPA certified in the February 7, 1990 letter that the remedial action work under the Consent Decree had been completed.

From January 1989, Operation & Maintenance activities have continued as part of the ground water remedial investigation. In the Summer 1990, Arthur D. Little, EPA's remedial contractor, replaced locks on the fence gates and performed an inventory of the existing monitoring wells to determine their location and condition. A total of 36 monitoring wells, two bedrock pumping wells, and two overburden observation wells were located and marked. The locking mechanisms on wells were repaired if needed and each well was locked with identically keyed Master locks.

In October 1990, Sanford Ecological Services, Inc., and Arthur D. Little, Inc., evaluated wildlife habitat of the Site. Their report (Wildlife Habitat Survey, October 1990) and field notes describes portions of the fenced disposal area being seeded with herbaceous cover mix. The area is being reported to be dominated by grasses with scattered clumps of shrubs, primarily sweet fern. Other plant species reported to be present include goldenrods, asters, birdsfoot trefoil, and common evening primrose. Also present were scattered gray birch, black cherry, and cottonwood saplings. Grass covering in area of the former PCB pile was different in species composition. Grass cover in the area was reported as nearly complete, thick and healthy.

During the field investigation from the Spring of 1990 through the Spring of 1993, EPA's contractors and EPA and RIDEM personnel visited the site on a continuous basis, which provided for periodic inspections of the site. Site observations indicated that erosion prevention measures have effectively preserved site cover. No damage to the fence, gates or locks have been observed or reported.

4.0 Results of Site Visit

A joint site visit by EPA and RIDEM personnel was conducted on April 27, 1993 for the purposes of this Five Year Review. No significant deficiencies requiring immediate maintenance or correction were revealed by the inspection. The following is a summary of the findings and conclusions of this inspection:

- The Site was found to be fenced with gates locked.
- No significant erosion was observed on graded areas within the fence.
- An adequate amount of vegetation cover was observed within the fence with the exception of the area of the former "PCB pile". The area is still protected by the haybales staked by the perimeter of the former "PCB pile".
- Rock and grass drainage ditches were found in good condition and are functioning as designed.

- Several areas with sparse vegetation and moss were observed in the west and north areas of the Site.

- Small holes, 1-2 inch deep, apparently caused by small animals, were observed throughout the enclosed area.

- Multiple areas along the fence were sufficiently off the ground (4-6 inches) to allow access by small animals.

- Monitoring wells observed during the visit were capped and locked.

- Thirteen drums were observed in the former truck decontamination area. Ten drums marked "SB Soil" are used to temporary store the soil from soil borings performed in the Summer of 1991 as part of the Remedial Investigation. Three drums with no covers were empty. In addition, two more empty drums are used to mark the access road in the northeast corner of the Site. The ten drums containing SB soil will be removed from the site and disposed of.

- Water from fifty eight drums marked "purged and development water" and a tanker truck with pump test water from the Remedial Investigation were removed off-site as non-hazardous waste on May 5th, 1993.

5.0 ARARs Review

The 1987 ROD required closure of the site including: removal of contaminated stockpiled soil to grade, grading and revegetating the site. Both, the 1985 ROD and the 1987 amended ROD stated that the remedy will not eliminate residual groundwater contamination at the site. In accordance with the 1985 ROD, EPA originally planned to implement a groundwater and surface water monitoring program and to establish risk based standards for the groundwater that are protective of public health, welfare and the environment.

The amended 1987 ROD called for an RI/FS to be conducted to determine the nature and extent of the residual contamination and to evaluate cleanup alternatives. Both RODs stated that if additional remedial actions are determined to be necessary, a Record of Decision will be prepared. A final Record of Decision for the site is planned to be issued in the September 1993.

6.0 Review Summary

The conclusions of this Five Year Review are summarized below. The documentary review and interviews with EPA and State personnel support these conclusions.

- The removal of contaminated soil and site closure were performed during the Summer of 1988 according to the requirements of the ROD (March 3, 1987). Documentation of the design and construction process support this conclusion.

- Under the 1988 Consent Decree the Potentially Responsible Parties performed site closure and the operation and maintenance of the site for the first year following the completion of construction. EPA and the RIDEM has conducted joint periodic inspections of the Site and O&M activities as part of the ground water remedial investigation.

- The RI/FS specified in the ROD has been performed and a ROD for final site remedial action is planned for September, 1993.

- During the past five years, the operation and maintenance of the Site was performed in accordance with the 1987 ROD.

- Documentation provided as part of the RI/FS adequately document conditions at the site and the O&M activities.

- The remedy selected in 1987 remains protective of human health and the environment.

- The remedy is functioning as designed: the fence is providing access control and the site grading and surface runoff system provides satisfactory erosion and drainage control.

7.0 Recommendations

The following recommendations are based on this Five Year Review:

- Periodic site inspections should continue.

- No additional work on the drainage structures, grading or vegetation cover is necessary or warranted at this time.

- No work on the fence, gates or fence locking mechanisms is necessary or warranted at this time.

ATTACHMENT A

Photographs
April 27, 1993 Site Visit - Picillo Farm Superfund Site

Photograph Number	Description
1	Northeast Gate
2	Decontamination/Drum Staging Area
3	Access Road Along East Side of the Fence
4	Former Northeast Trench
5	Former PCB pile
6	Southeast Gate
7	South Side of the Fence
8	Southwest Gate
9	View of Central Portion of the Site
10	Drainage Ditch from the Former PCB Pile
11	Sparse Vegetation with Moss, West Trench
12	Tanker and Drums with Well Development Water
13	Northwest Trench Drainage Ditch
14	North Fence and Drainage Ditch
15	View of North Portion of the Side, Example of Sparse Vegetation.

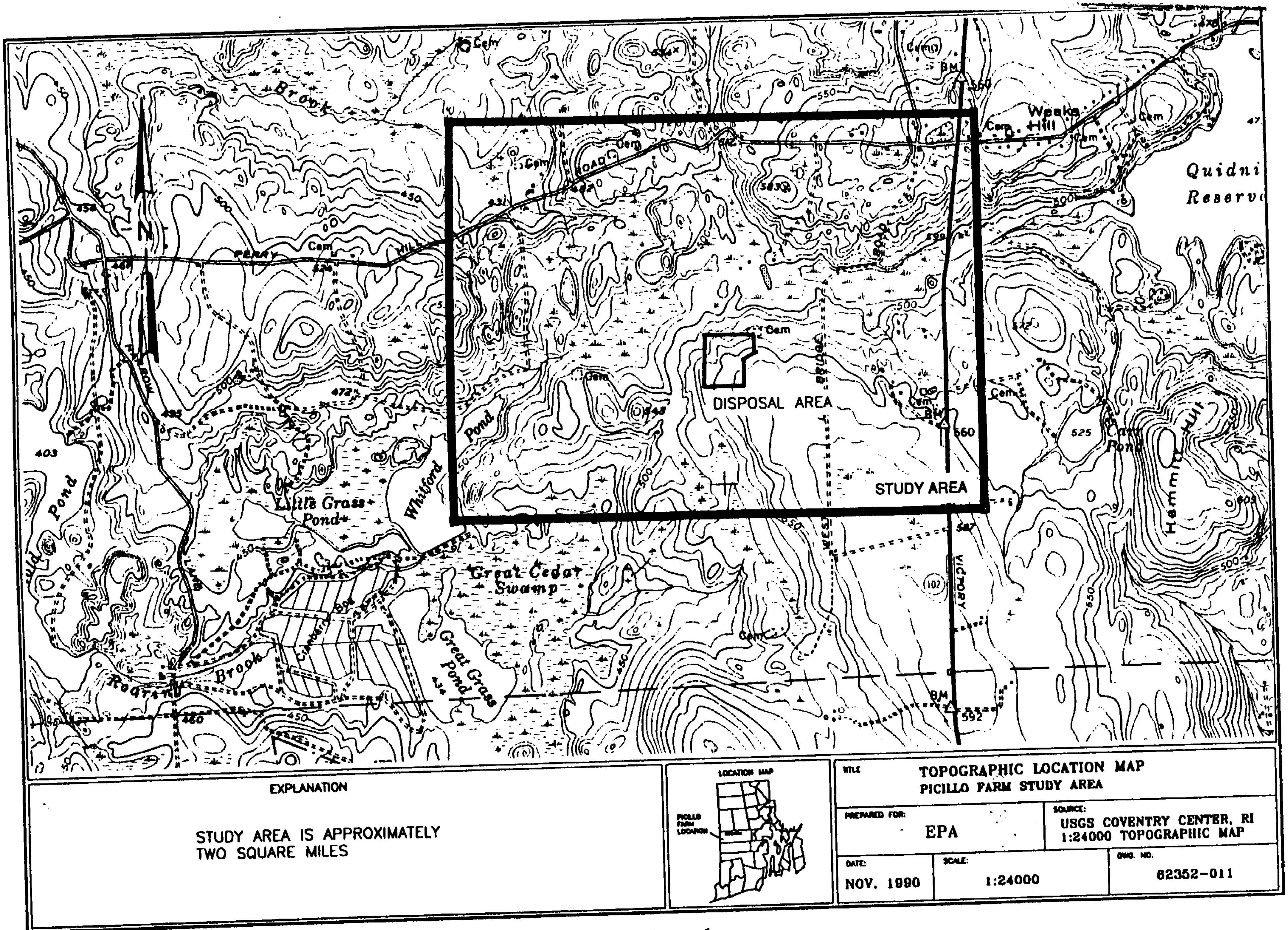

Brook
PERRY
HILL
ROAD
Cem
Weeks Hill
Quidni
Reserv
DISPOSAL AREA
STUDY AREA
BM
560
587
592
WEST
BRIDGE
VICTORY
Pond
Little Grass Pond
Whitford
Great Cedar Swamp
Great Grass Pond
Brook
EXPLANATION
STUDY AREA IS APPROXIMATELY
TWO SQUARE MILES
LOCATION MAP
TITLE
TOPOGRAPHIC LOCATION MAP
PICILLO FARM STUDY AREA
PREPARED FOR:
EPA
SOURCE:
USGS COVENTRY CENTER, RI
1:24000 TOPOGRAPHIC MAP
DATE:
NOV. 1990
SCALE:
1:24000
DWG. NO.
62352-011

Figure 1


STOP
RESTRICTED AREA
ALL VISITORS
AT OFFICE
1


2


3

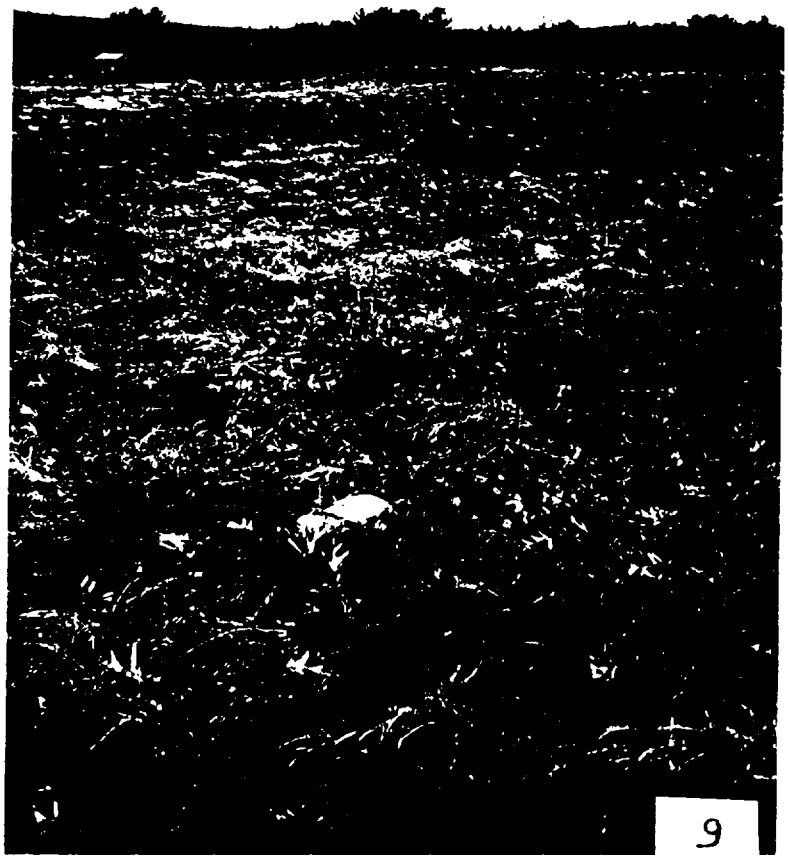

4


5


6


7


8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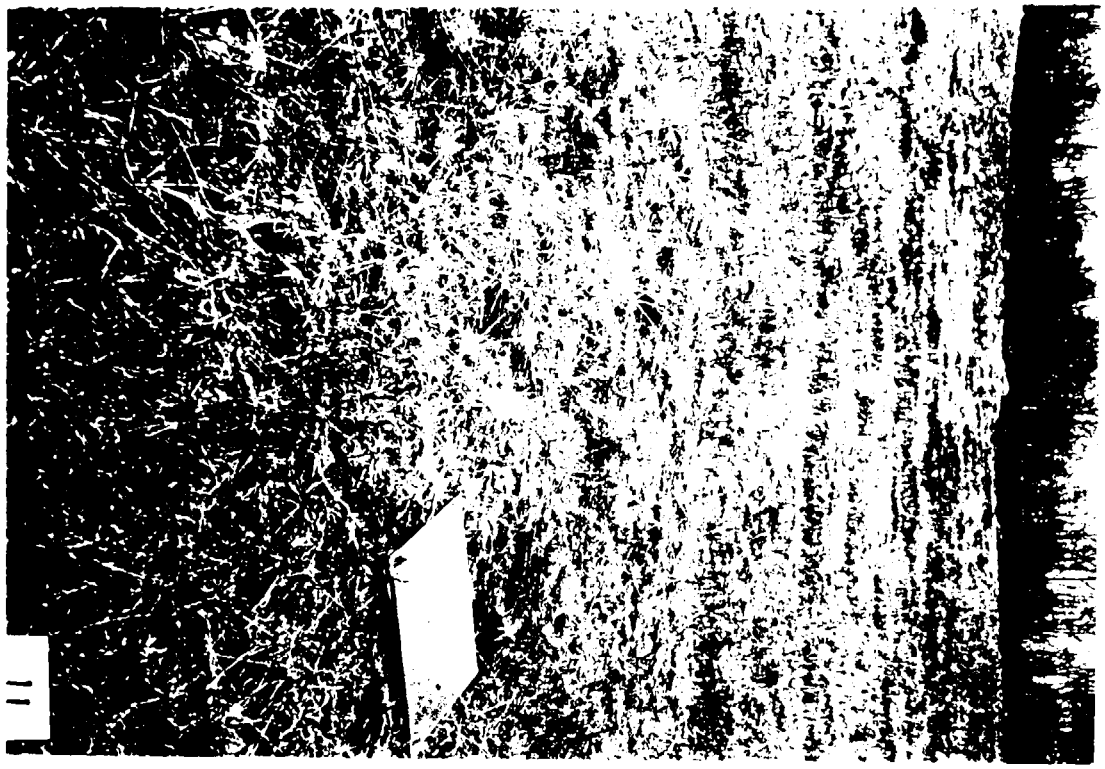
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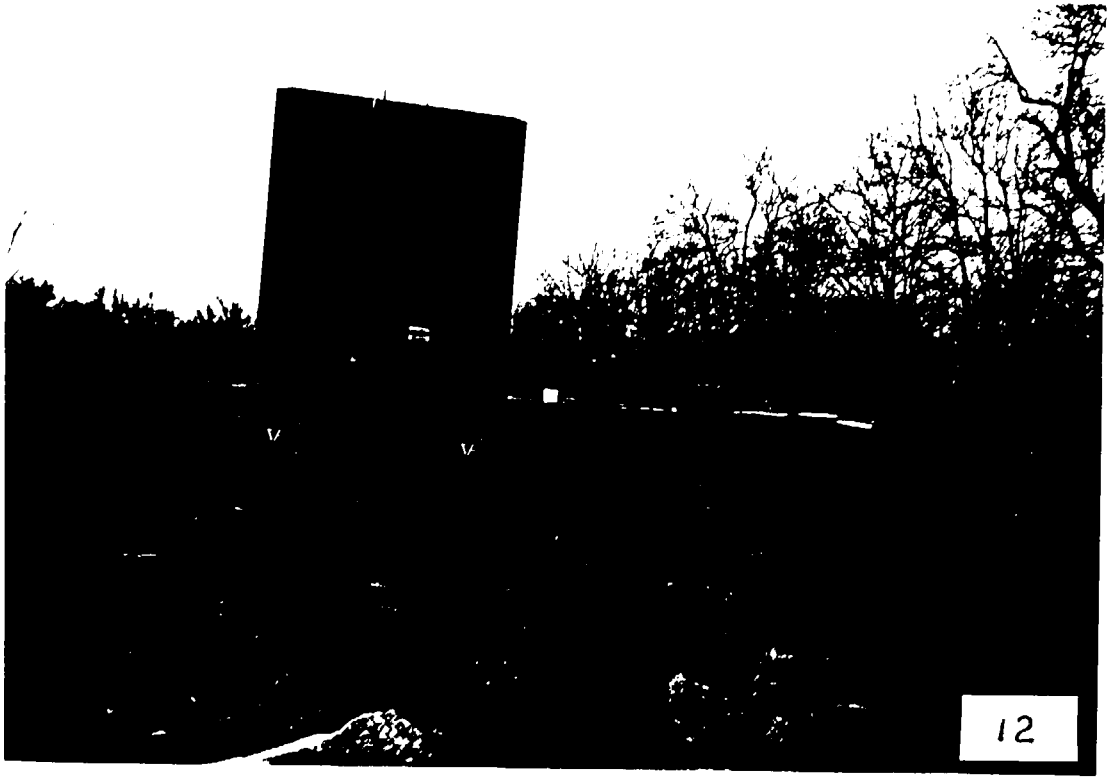
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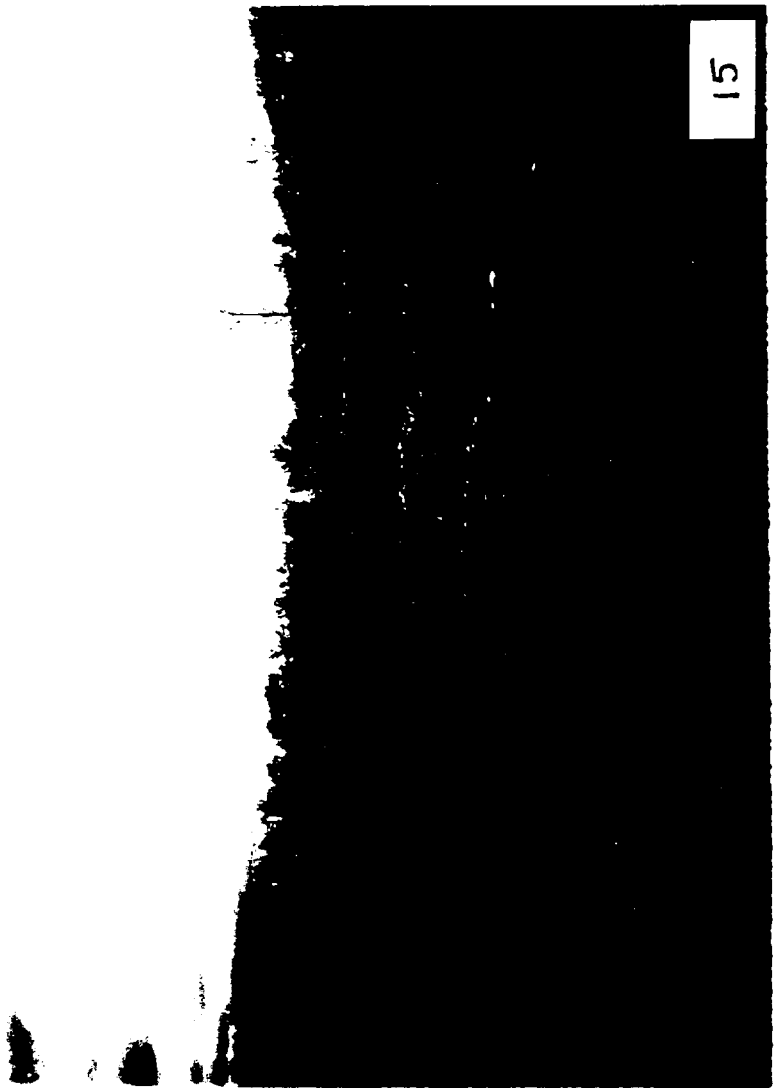
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